Foundation for Intelligent Physical Agents
The release of standard specifications
www.fipa.org

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FIPA and Agentcities

FIPA mission:

The promotion of technologies and interoperability specifications that facilitate the end-to-end interworking of intelligent agent systems in modern commercial and industrial settings.

In an open and distributed agent-based environment such as Agentcities the need of standard mechanisms and specifications is crucial for ensuring interoperability of distinct autonomous systems.
FIPA’s Action Field

- Development of standard specifications
- Guidelines for industrial development of agent platforms and agent-based applications
- Discussion forum:
  - FIPA meetings: next 14-19 October 2002, Pensacola, US.
  - On line (www.fipa.org): fipa@chat.org
- Strong liaison with universities, projects, standards, and implementations
- Sponsoring of relevant events in the agent world and diffusion of the main results in several ways (newsletter, web site, white papers, etc.)
FIPA Organization

- **Board of Directors**
  - **FIPA Secretariat**
  - **Image Committee**
    - FIPA Inform! newsletter
  - **Finance and Audit Committee**
    - Non-profit
  - **Membership & Nomination Committee**
    - Open membership
- **Special Interest Groups**
  - No formal workplan
  - Discussion
  - Formulation of further activities
- **FIPA Architecture Board**
  - Technical coordination
  - Workplans
- **Working Groups**
  - Informative Specs
  - Applications
  - Test fields
- **Technical Committees**
  - Normative Specs

How to contribute to FIPA

- Make use of the specifications and report back to the FIPA community
- Participate to the FIPA meetings (open and free!)
- Participate to the mail discussions (various mailing list for different topics exist)
- Make an active contribution to the work and to the creation of FIPA specs.
Contributing to FIPA Specs

- An idea for FIPA work is formed, elaborated, discussed (chat@fipa.org or specific existing working groups)
- Submitted as workplan to the FIPA Architecture Board (fab@fipa.org)
  - Timeline, Committed participants
- A Workplan can be carried out by
  - Technical Committee (TC) for normative specifications
  - Working Group (WG) for informative specs, applications, field trials, …
- Specifications are created
  - Preliminary (P): Draft under discussion (TC)
  - Experimental (X): Stable, suitable for implementation (FAB)
  - Standard (S): Stable, successfully implemented (FAB, Membership)
  - Deprecated (D): Potentially unnecessary (FAB, Membership)
  - Obsolete (O): Rendered unnecessary
Current Activity

TC X2S:
- Promoting to 'Standard' status a core set of FIPA specifications by the end of this year.

TC services:
- Building a service model for representing, modelling, discovering and using services.

TC semantics:
- Developing a new semantic framework to reflect the needs of verifiability and conformance.

TC ontologies:
- Standardising ontology modelling, representations and use within agent systems.

TC Ad Hoc:
- Specifications to facilitate interoperability between agents operating on different platforms in ad hoc environments.
And some more...

- **Security working group:**
  - Develop security guidelines for FIPA and agents in general

- **Planning and Scheduling:**
  - To promote and support the development of agent applications that require coordination of task execution.

- **FIPA for business applications SIG**
  - Created to ensure and demonstrate the business relevance of FIPA

- **Liaison SIG**
  - Makes liaison to projects, implementations, universities...
Toward new standard specs

X2S activity:

- 81 specs out of which 35 experimental specs
  - www.fipa.org/activities/experimental_to_standard.html
- For most of the specs we have:
  - Several implementations,
  - Several years of experience and use
  - Several companies using them
  - Several 25 AgentCities platforms interoperating based on them

X2S main milestone:

- Pensacola, October 2002, final comments will be analysed and the final set of FIPA specifications will be released for promotion to Standard status under membership approval
List of specifications that will be released for promotion to standard (as for 27 Aug 2002)

- EnvelopeEncodingScheme
-ACLEncodingScheme
-CLEncodingScheme
-TransportProtocol
-Envelope
-InteractionProtocol

1 isTransmittedOver 1
1 contains 1..*
1 isExpressedBy 0..* 0..*
1 contains

- IDL
- XML
- bit-eff

- String
- XML
- bit-eff

-fipa-agent-management

request, query, request-when
contract-net, iterated-contract-net
brokering, recruiting
subscribe, propose
List of specifications that will be released for promotion to standard (as for 27 Aug 2002)

- Agent Platform
  - Abstract Architecture
  - Service
    - Normative services
      - Life cycle Management
      - White page service
      - Yellow page service
      - Message Transport service
  - Agent Management
  - Message Transport Service
How to contribute to FIPA X2S

- All contributions are welcome
  - Contributing to improve the specifications is a duty of the R&D community

- On-line form available at
  - www.fipa.org/html/x2s_template.html
    - A contact point is needed
    - Brief description of the problem
    - Proposed modifications to the FIPA specifications

- e-mail reflector: x2s@fipa.org
Conclusion

- IMPORTANT NEWS:
  - FIPA standard specs will be published by FIPA in the form of books (more details after the next FIPA meeting)
  - Stay tuned on the FIPA web site www.fipa.org

- Thanks to the all FIPA community and in particular to Bernard Burg and Fabio Bellifemine for their precious contribution to this presentation and
- Many thanks to the Agentcities community to promote agent technology and the FIPA’s work!

Back Up slides
The Specs life cycle

Birth: approval of TC

- Preliminary
  - Promotes approval of FAB
  - Expires after 6 months

- Experimental
  - Promotes approval of FAB + vote of FIPA members
  - Expiration after 2 years

- Obsolete
  - Approved of FAB + vote of FIPA members

- Standard
  - Approval of FAB + vote of FIPA members
  - Retires after retire date

- Deprecated (retire date)

Voting procedure

- The approval of the FIPA members is required for the creation of Standard documents
  - Multiple related documents may be approved together.
  - Approvals of this kind are carried out by balloting the FIPA members using electronic mail
  - It requests each FIPA member organization to submit a vote by email to the organizer by a stated due date, not less than 21 days after the transmission of the ballot notice.
  - Each FIPA member sends to the organizer one email ballot with the following information: […]
    - A vote, one of Approve, Disapprove, Disapprove with Comments or Abstain,
      - in the case of a vote of Disapprove with Comments, a description of the changes to the documents or other actions which could lead to an Approve vote,
  - When a ballot is concluded, the organizer will send an email to all FIPA members giving the results of the ballot. This email will include the number of votes received in each category and the overall result: Approved or Disapproved.
  - For publishing a Standard specification, approval requires that the number of Approved votes is greater than the number of Disapproved votes.